IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jensenius et al.,

Serial no.: 09/874,238

Filed June 4, 2001

For: MASP-2, a complement fixing enzyme and uses for it

Art Unit: 1632

Examiner: CHEN, S.

Attorneys docket No.: JENSENIUS=3B

DECLARATION UNDER RULE 1,32

U.S. Patent and Trademark Office
2011 South Clark Place
Customer Window
Crystal Plaza Two, Lobby, Room 1B03
Arlington, Virginia 22202

Sir:

1. I am one of the named inventors of the above-identified application

2. I am familiar with the publication Thiel et al., "A second serine protease associated with Mannan-binding lectins that activates complement", Nature 386:506-10 (April 3, 1997)

3. Cordula Stover is one of the co-authors of that publication. However, she (and the other omitted co-authors) did not make an inventive contribution to the claims of the above-identified application. All of the omitted co-authors, save for Cordula Stover, have signed a declaration attesting that they do not qualify as inventors for this application.

4. The protein now designated MASP-2 was isolated and identified in Aarhus by Steffen Thiel and Jens Chr. Jensenius through its reaction with a chicken antibody.

   Working as a graduate student under guidance of Wilhelm Schwaeble, Cordula Stover cloned and sequenced cDNA sequences encoding i.a. full-length MASP-2. This was accomplished with the aid of a 300 bp cDNA fragment generated by RT-PCR from liver. Said fragment was cloned by the graduate student Thomas Vorup Jensen under guidance of Steffen Thiel and Jens Chr. Jensenius. Three different cDNA clones were sequenced. One (A) represents the full length was found to encode a protein of 622 amino acids showing about 40% sequence identity to C1r, C1s and MASP-1. Another clone (C) represented the N-terminal part of clone A with additional four amino acids not found in A. The size of

C (ORF of 540 bp) agrees with it representing mRNA encoding the truncated form of MASP-2. The third clone (B) has a 5' end almost identical to C but in addition an ORF of 558 bp with no similarity to A.

5. Cordula Stover has refused to sign a "Declaration of non-inventorship" similar to the declaration signed by her supervisor Wilhelm Schwaeble. As appears from the enclosed copy of an e-mail from Cordula Stover, she wants to keep the right to any source she has co-explored.

6. However, even though Cordula Stover has been involved in the experimental work leading to cloning of full length MASP-2, she is not a co-inventor of the above-identified application. Cordula Stover did not provide or contribute to the inventive concept underlying any claims of the above identified application. Merely performing the experimental work of cloning a full-length cDNA sequence starting from a 300 bp sequence fragment of said cDNA cannot be regarded as an act of inventorship, which under U.S. law requires specific conception of the claimed invention. Both the cloning and the sequencing procedures were routine, and her work was under supervision.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

Jens Christian Jensenius

18/10/03
Date

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Sir:

1. I am one of the named inventors of the above-identified application

2. I have read and understood the above-mentioned patent application including the claims of said application.

3. The protein now designated MASP-2 was isolated and identified in Aarhus by Steffen Thiel and Jens Chr. Jensenius through its reaction with a chicken antibody. Said antibody was raised by ST and JCJ by immunizing chickens against a preparation of bovine plasma lectins and lectin-associated proteins.

   A lectin preparation was purified from human plasma and a protein, later termed MASP-2, was identified from said fraction by Western blotting using the chicken antibody described above. The N-terminal amino acids of this protein of 52 kDa by SDS-PAGE was sequenced in Oxford by Anthony C. Willis from blots on PVDF membranes provided by ST and JCJ. Antibodies to a synthetic peptide representing the identified N-terminal 19 amino acids were then prepared by ST and JCJ.

   This antibody was by ST and JCJ shown to react both with the 52 kDa protein as well as with a protein of 76 kDa. The N-terminal of the 76 kDa protein showed sequence similarity to a previously identified protein, termed MASP. ST and JCJ showed that upon activation the 76 kDa protein was generating the 52 kDa fragment.

The protein identified by the antibodies described above was found to be associated with mannan-binding lectin and was found to be able to activate the complement factor C4.

ST and JCJ deduced that the new protein could be a protein with similarity to the protein previously named "MASP" (now termed MASP-1) and thus suggested the name MASP-2 for the new protein.

4. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

Steffen Thiel

27/10-03

Date

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Jens Christian Jensenius

Date 27/10/03